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PTO/SB/17 (12-04v2)

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| Effective on 12/08/2004. Complete if Known Complete if Known | | | | | | | | |
|---|----------------|------------------------------|---------------------------|-------------------------|------------|-----------------------------|--------------------------|--|
| | | | Application Number 10/665 | | 10/665,634 | /665,634 | | |
| FEE TR | SMA | | | Filing Date | | September 19, 20 | 03 | |
| For | FY 20 | 005 | | First Named Inv | entor/ | Charles L. Gray, J | r. | |
| | | | | Examiner Name | e | Trieu, Thai-Ba | | |
| Applicant claims small | entity status | s. See 37 CFR 1.2 | 27 | Art Unit | | 3748 | | |
| TOTAL AMOUNT OF PAYR | MENT (\$) | 180.00 | | Attorney Docke | t No. | EPA 680-03 | | |
| METHOD OF PAYMENT | C /obook all | that apply) | | | | | | |
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| under 37 CFR WARNING: Information on this information and authorization | 1.16 and 1. | .17 ecome public. Credi | | الله الله الله | • | • • | ovide credit card | |
| FEE CALCULATION | | | | · | | | | |
| 1. BASIC FILING, SEAR | CH, AND | EXAMINATION | FEES | | | | | |
| | FILING | | SEAR | CH FEES | EXA | AINATION FEES | | |
| Application Type | Fee (8) | imall Entity Fee (३) | Fee (\$ | Small Entity Fee (§) | Fee | Small Entity (৪) Fee (৪) | Fees Paid (8) | |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | | |
| Provisional | 200 | 100 | 0 | 0 | (| 0 | | |
| 2. EXCESS CLAIM FEE | :S | | • | | | Fee (8) | Small Entity Fee (\$) | |
| <u>Fee Description</u> Each claim over 20 (i | ncluding R | (eissues) | | | | 50 | 25 | |
| Each independent clar | _ | , | ues) | | | 200 | 100 | |
| Multiple dependent cl | laims | <u>-</u> | | | | 360 | 180 | |
| Total Claims | Extra Clair | ns <u>Fee (\$)</u> | <u>Fee</u> | Paid (\$) | | | pendent Claims | |
| - 20 or HP = HP = highest number of total | claims paid fo | X or, if greater than 20. | - - | | | <u>Fee (3)</u> | Fee Paid (§) | |
| Indep. Claims | Extra Clair | - | Fee | Paid (S) | | | | |
| -3 or HP = | andert daim | XX | = | | | | | |
| HP = highest number of independent claims paid for, if greater than 3. 3. APPLICATION SIZE FEE | | | | | | | | |
| If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer | | | | | | | | |
| listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | | | | | | |
| Total Sheets Extra Sheets Number of each additional 50 or fraction thereof Fee (S) Fee Paid (3) - 100 = /50 = (round up to a whole number) x = | | | | | | | | |
| 4. OTHER FEE(S) Non-English Specification, \$130 fee (no small entity discount) | | | | | | | | |
| Other (e.g., late filing surcharge): IDS, under 37 CFR 1.17(p) \$ 1.97(c) [80,80] | | | | | | | | |
| SUBMITTED BY | | | | | | | | |
| | -()- | 0 | | Registration No. | | Telephon | 20 | |

Signature

Registration No. 47,888

Name (Print/Type) David H. Read

Registration No. 47,888

Date August 11, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chiaf Information Officer, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:

Charles L. Gray, Jr

Application Number :

10/665,634

Filing Date

September 19, 2003

Invention Title

Methods for low emission, controlled temperature combustion in engines which utilize late direct cylinder

injection of fuel

Examiner Name

Trieu, Thai-Ba

Art Unit

3748

Attorney Docket

: EPA 680-03

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

In accordance with 37 CFR 1.56 and 1.97 through 1.98, applicant makes known to the U.S. Patent and Trademark Office the references set forth on the attached PTO Forms. Copies of the cited U.S. patents and published patent applications are not required and accordingly have not been provided. Copies of all other cited references are enclosed. As to any reference cited, applicant does not admit that such art is relevant or is actually prior art to the application.

David H. Read, Reg. No. 47,888

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| Substitute for form 1449/PTO | 1 | Com | plete if Known |
| | AUG 1 1 2005 3 | Application Number | 10/665,634 |
| INFORMATION DIS | | Filing Date | Sept. 19. 2003 |
| INFORMATION DIS STATEMENT BY A | DECOUNT OF | First Named Inventor | Charles L. Gray, Jr. |
| SIAIEWENI BY A | P C C AND | Art Unit | 3748 |
| (Use as many sheets as ne | cessary) | Examiner Name | Trieu, Thai-Ba |
| Sheet of | 1 | Attorney Docket Number | EPA 680-03 |

| | _ | | U. S. PATENT [| | |
|-----------------------|---------------------------------------|--|-----------------------------|--|---|
| Examiner Initials* | Cite No. ¹ | Document Number Number-Kind Code ^{2 (d known)} | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | US- 4,727,849 | 03-01-1988 | Nishida | |
| | | US- 6,606,979 | 01-31-2002 | Kimura Romzek Monceile Beck | Figure 12 |
| | | US- 6, 508, 237 | 01-23-2003 | Romzek | J |
| | | US- 6, 523, 529 | 02-25-2003 | Monceile | |
| | | US- 6, 273, 076 | 08-14-2001 | Beck | |
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| FOREIGN PATENT DOCUMENTS | | | | | | |
|------------------------------|-------------------------|---|--|---|----------------------------|---|
| Examiner Cite Initials* No.1 | Foreign Patent Document | Publication Date | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages | | |
| | | Country Code ³ Number ⁴ Kind Code ⁵ (if known) | MM-DD-YYYY | | Or Relevant Figures Appear | - |
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|--|--|----------------------|--|
| Substitute for form 1449/PTO AUG 1 1 2005 | Application Number | 10/665,634 | |
| INFORMATION DESCLOSURE | Filing Date | Sept. 19, 2003 | |
| STATEMENT BY ARPLICANT | First Named Inventor | Charles L. Gray, Jr. | |
| | Art Unit | 3748 | |
| (Use as many sheets as necessary) | Examiner Name | Trien, Thai-Ba | |
| Sheet of | Attorney Docket Number | EPA 680-03 | |

| NON PATENT LITERATURE DOCUMENTS | | | | |
|---------------------------------|--------------------------|---|----------------|--|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² | |
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